Estimator's Corner

NEWSLETTER

September 2008

Project cost estimating data provided by the
Utah Department of Transportation Engineering Services Division

This Issue's Featured Estimating Tip
Asphalt Cost and Availability Update

There is a limited supply of asphalt binder for Hot Mix Asphalt (HMA) in the Rocky Mountain Region. The two main suppliers for this region, Sem Materials and Peak have both exhausted their asphalt stockpiles produced during the winter used to meet the high demand of the summer months. This signifies that the suppliers are not currently able to provide enough asphalt to meet the entire demand in the region. This lack of supply has led to very high prices as seen by recent bid openings of $87-$162 per ton for ¾ inch HMA. The shortage of storage capacity and overall supply can be attributed to several different things:

- Sem Materials, which is the main supplier for Utah and supplies about 60% of the asphalt in the state, has declared bankruptcy and is not able to fulfill all of their commitments to contractors. Peak has fulfilled their commitments but does not have any additional supply.
- Asphalt has traditionally been viewed as a low-valued, left-over product from the refining process. Refineries now have cokers that are able to further refine this left-over product into more profitable products like gasoline. This means that asphalt production must compete directly with lucrative gasoline production.
- The rising cost of crude oil has impacted the initial costs at the refineries.

UDOT projects account for 15-20% of the total asphalt demand in the region. Any additional projects that require paving prior to October 15, 2008 may not receive asphalt or must pay an extreme price in order to import asphalt.

The UDOT asphalt binder price index began 2008 at $352 per ton. Industry representatives forecast that the current index value of $688 per ton will not drop significantly over the winter for projects advertised for the 2009 paving season. It is anticipated that the index for August will be approximately $750. Asphalt costs could rise sharply again during the summer of 2009 as the winter supply becomes exhausted. This winter supply will be under extra strain since the paving for several 2008 projects has been postponed to 2009. Bid prices for HMA that started 2008 in the $65-$75 range will likely start 2009 higher in the $90-$110 per ton range for ¾ inch HMA and may likely rise again during the peak summer paving months.

A supply facility is currently being built in Tooele, Utah to help alleviate summer supply shortages and price spikes from occurring in future years. This facility will not be fully functional until at least 2010 but early storage capacity coming on-line in 2009 should improve the availability of non-polymer asphalts used in chip seal and microsurfacing applications.

FUEL AND ASPHALT COST ADJUSTMENT

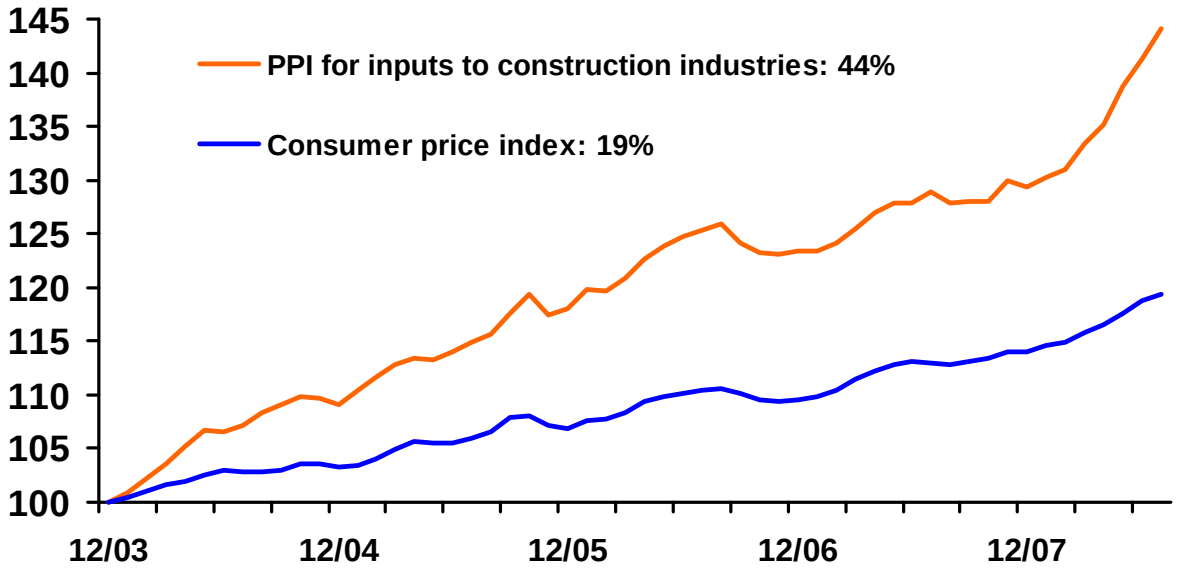
Have you ever wondered how much the fuel and asphalt cost adjustment increases project costs during construction? In 2007 and 2008 the average increase was 2 to 2.5 percent of the total project cost on projects that required the adjustment. Consider the impact that these post design increases can have on projects, especially when project budgets are tight. Watch for a new steel price adjustment special provision in the upcoming weeks.

STRUCTURES COST ESTIMATING

Many structures costs in PDBS are lump sum. Unit cost data for structural items have been compiled into a user friendly table which can be obtained on the Estimator's Corner web site. The following data is included:

- Structural Concrete
- Structural Steel
- Bridges
- Retaining Walls
- Pre-stressed Concrete Members
- Precast Deck Panels

Cumulative Change in Consumer and Construction Prices
(All PPIs = 100 in 12/03)
AGC of America (December 2003 = 100)
2003 – 2008

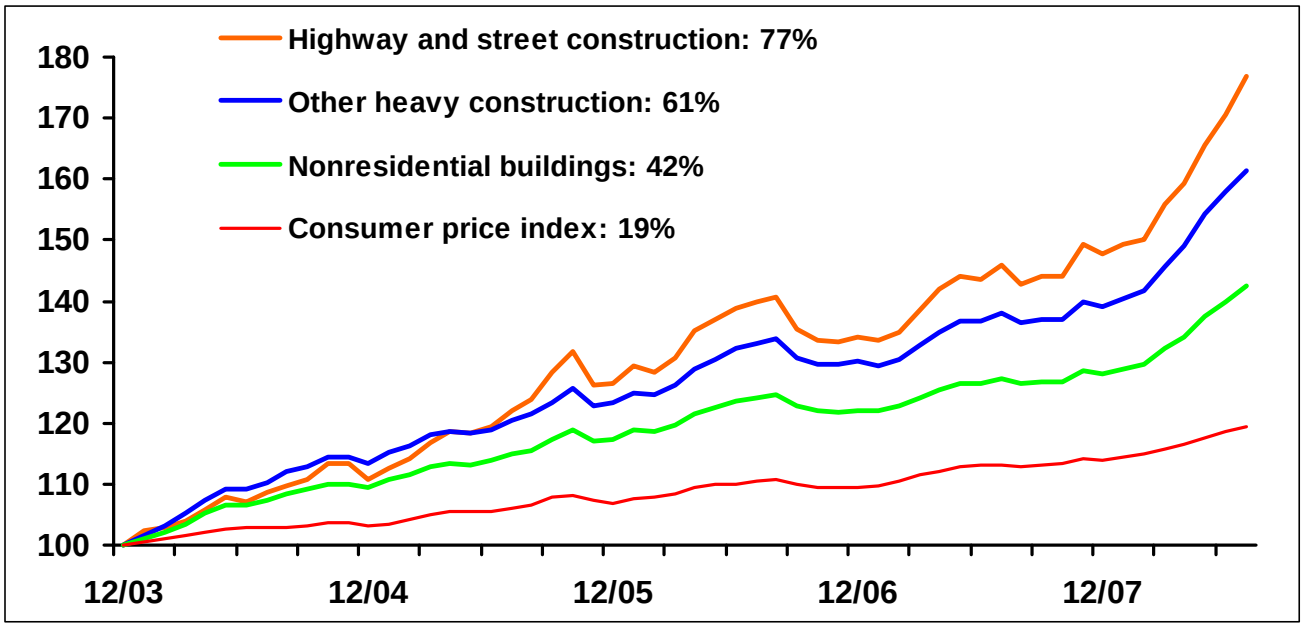


Cumulative Change in Producer Price Index (PPI) for Construction Types

(All PPIs = 100 in 12/03)

AGC of America

2003 – 2008

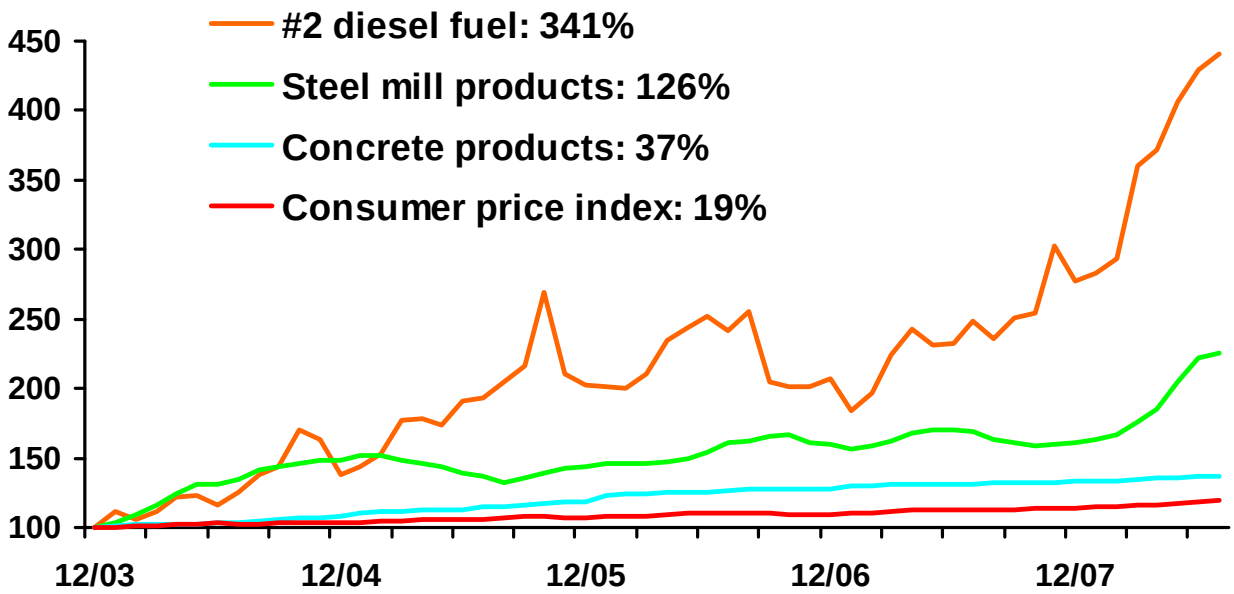


Cumulative Change in Producer Price Index (PPI) for Highway Inputs

(All PPIs = 100 in 12/03)

AGC of America

2003 – 2008



Rising Prices
Steel, Asphalt Binder, and Crude Oil

The average retail price of on-highway diesel fuel fell for the sixth straight week by six cents per gallon to $4.14 down 13 percent from the record of $4.76 set on July 14, but up 45 percent from a year ago.
The Data DIGest – 8/25/08

Item	Monthly Rise	12-Month Rise
Asphalt at Refineries	21.3%	78.1%
Concrete Products	0.1%	3.8%
Diesel Fuel	2.7%	77.6%
Highway and Street Construction	3.8%	21.4%

Bureau of Labor Statistics, AGC of America, 8/25/08

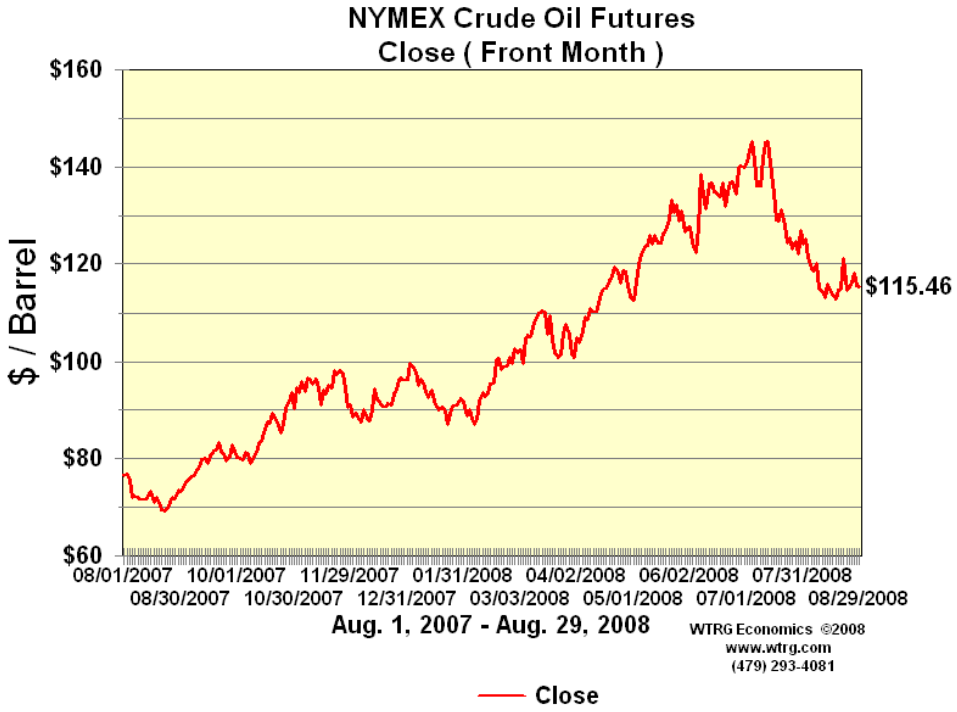
Crude Oil

Percentage Changes in Producer Price Indexes for 2001-2008

Item	2001	2002	2003	2004	2005	2006	2007	Net 12 Month Change
Crude Oil – Domestic Production	-42.4	60.6	14.3	30.5	49.6	0.1	52.4	94.3

Bureau of Labor Statistics, AGC of America, 8/25/08

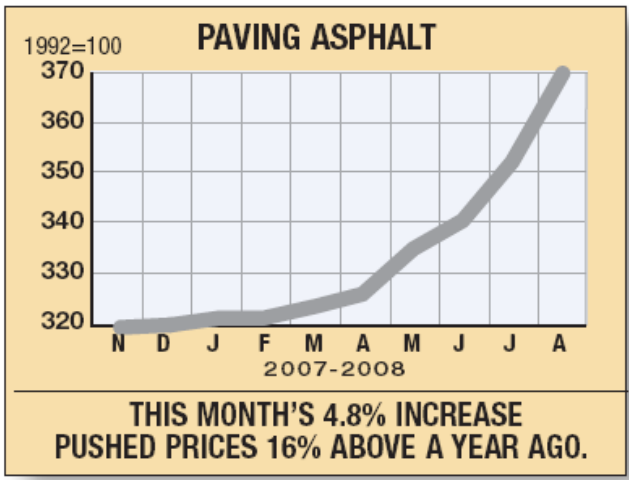
August 29, 2008, NYMEX West Texas Intermediate for October delivery closed down $0.13 at $115.46 per barrel.



Asphalt

It was only a matter of time before record high crude oil prices started to impact asphalt paving costs. Asphalt paving prices are starting to move again after jumping over 25% at the beginning of last year according to the Bureau of Labor Statistics producer price index for asphalt paving products. The PPI for this product showed a 3.5% gain in April over last year's record high. The ENR 20-city average price for asphalt paving oil jumped 4.8% this month and is now up 16.1% above a year ago.

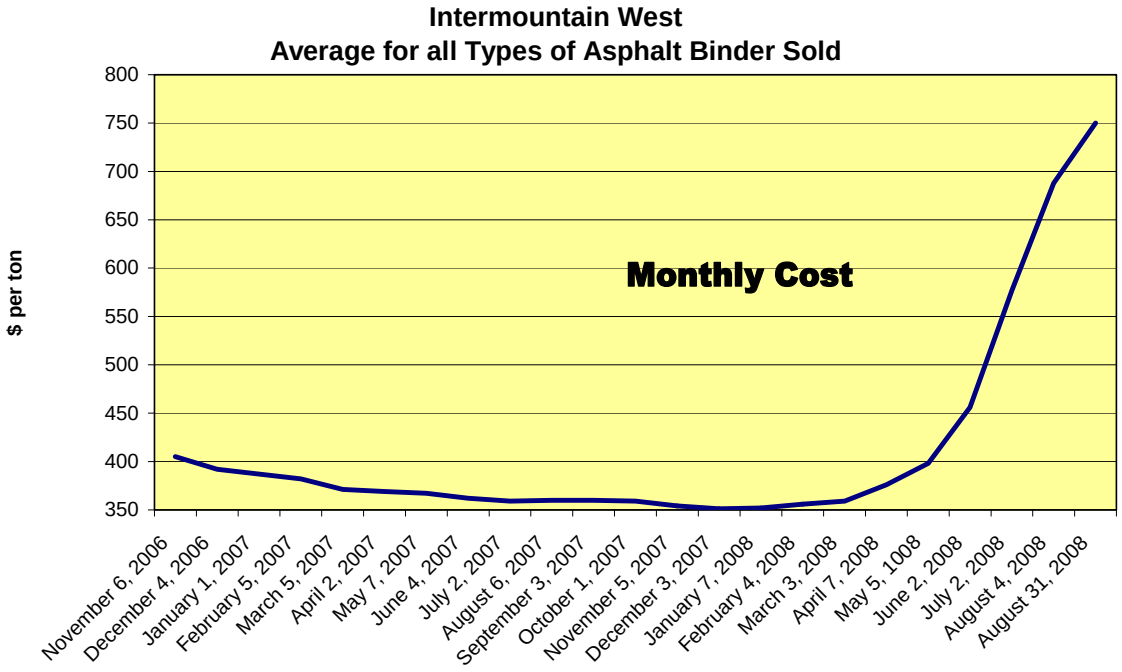
ENR- 8/11/08



Percentage Changes in Producer Price Indexes for 2001-2008

Item	2001	2002	2003	2004	2005	2006	2007	Net 12 Month Change
Asphalt at Refinery	-	-	10.0	18.3	17.8	34.9	5.8	78.1

Bureau of Labor Statistics, AGC of America, 8/25/08

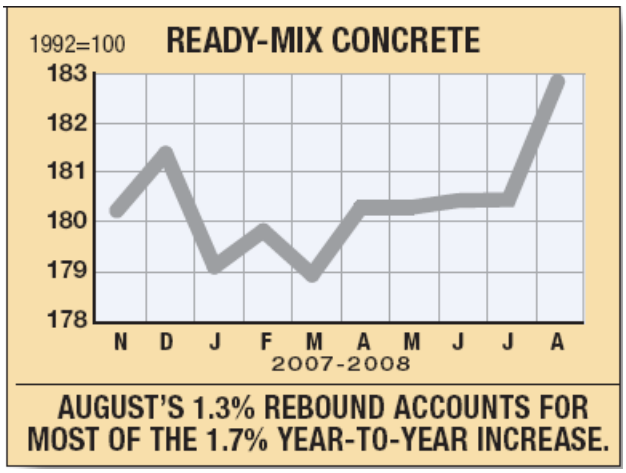


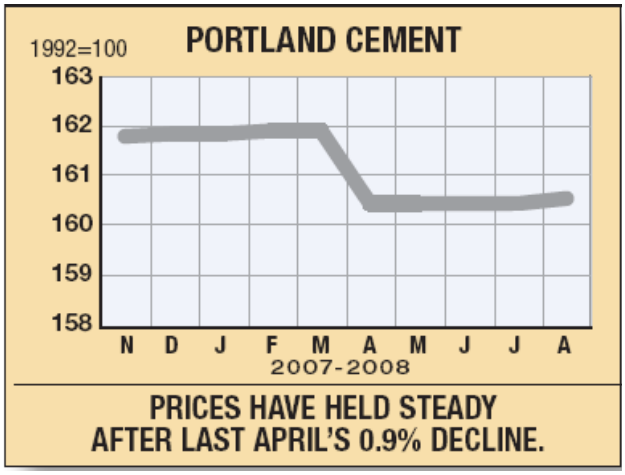
Produced by Utah Department of Transportation Materials Division.
Based on information from Asphalt Weekly Monitor and Argus Report.

Note: This graph is intended to show the direction of asphalt binder costs and not actual costs for asphalt binder. The August 31, 2008 figure is a projection.

Cement

Portland cement prices have shown little movement following strong gains between 2005 and 2007. Cement prices are up just 0.2% for the year.
ENR- 6/2/08





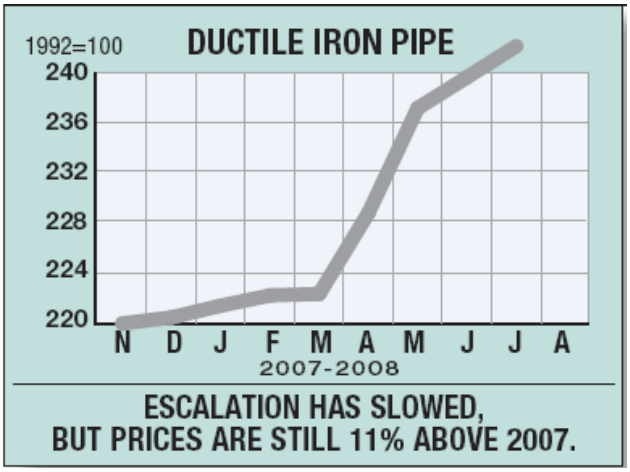
Percentage Changes in Producer Price Indexes for 2001-2008

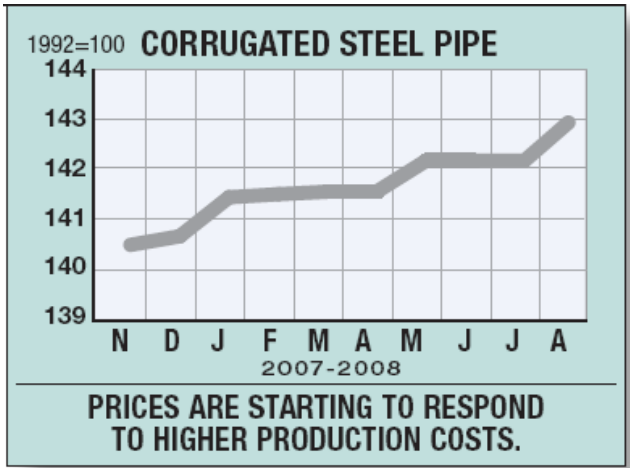
Item	2001	2002	2003	2004	2005	2006	2007	Net 12 Month Change
Construction Sand/Gravel/ Crushed Stone	3.3	2.5	2.4	4.3	7.7	9.3	8.6	7.0
Cement	1.0	1.3	-1.1	7.9	12.2	10.5	3.5	0
Concrete Products	2.5	-0.3	1.5	7.6	10.1	8.1	3.3	3.8
Ready-Mix Concrete	2.5	-1.1	1.1	8.7	11.3	10.1	3.3	2.6
Precast Concrete Products	0.7	0.3	2.5	6.0	6.0	4.7	4.8	4.7
Prestressed Concrete Products	5.3	1.8	-0.2	8.2	14.3	4.9	1.2	4.7

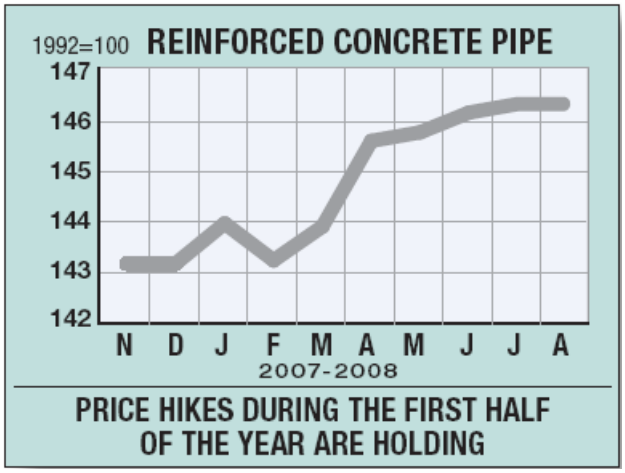
Bureau of Labor Statistics, AGC of America, 8/25/08

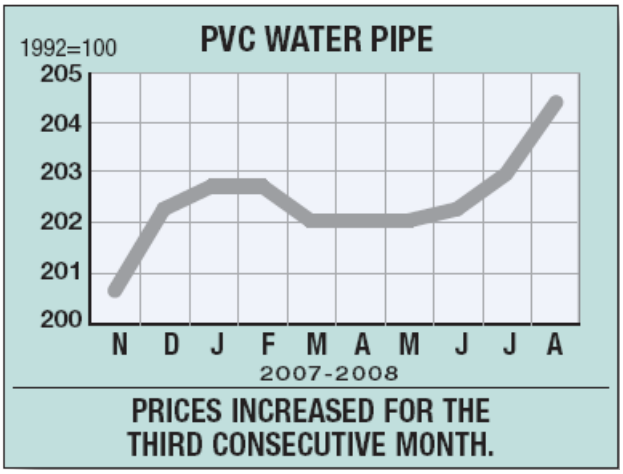
Pipe

Prices for ductile iron pipe tracked by ENR are up between 7% and 11% from a year ago, due primarily from the spike in raw-material prices. Weak demand in the PVC water and sewer pipe markets are trumping high oil costs and the annual price increase for PVC pipe is about 2%.
ENR - 8/18/08









Percentage Changes in Producer Price Indexes for 2001-2008

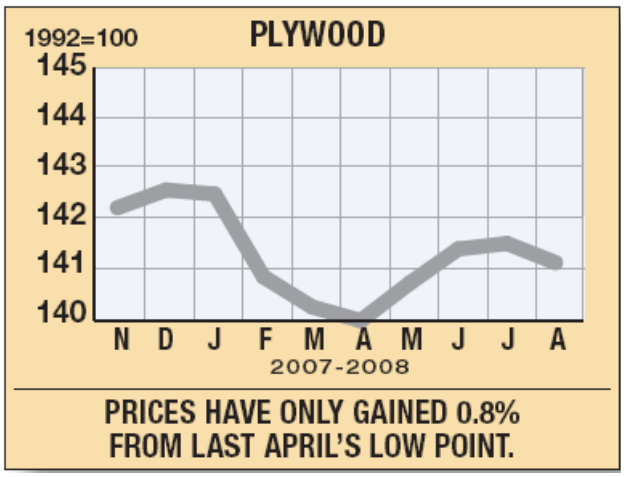
Item	2001	2002	2003	2004	2005	2006	2007	Net 12 Month Change
Concrete Pipe	4.4	1.7	1.4	5.5	7.5	2.5	1.1	13.2

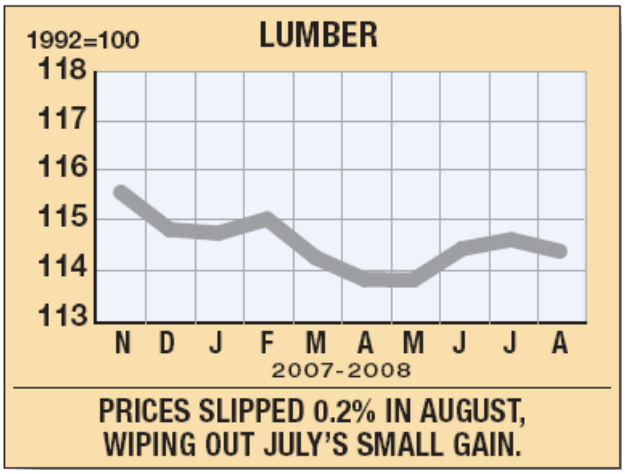
Bureau of Labor Statistics, AGC of America, 8/25/08

Lumber

The weak housing market started cutting into lumber prices in 2005 and the downward pressure has yet to let up. The average mill price for lumber in July was down 12 percent from the previous year. This year's price decrease follows year-to-year declines of 4 percent in 2007, 18 percent in 2006 and 11 percent in 2005, according to Random Length's composite index for framing lumber. The ENR 20-city average price for 2x4s fell 2 percent this year following a 9 percent decline in 2007.

ENR – 8/25/08





Percentage Changes in Producer Price Indexes for 2001-2008

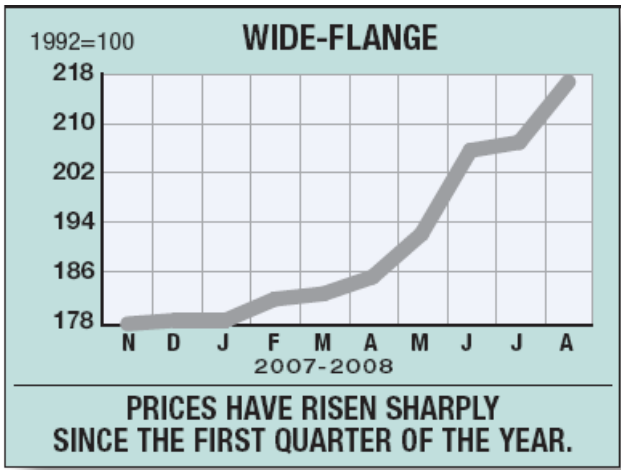
Item	2001	2002	2003	2004	2005	2006	2007	Net 12 Month Change
Lumber and Plywood	-2.9	1.4	13.1	5.0	-1.1	-10.8	-1.3	-5.9

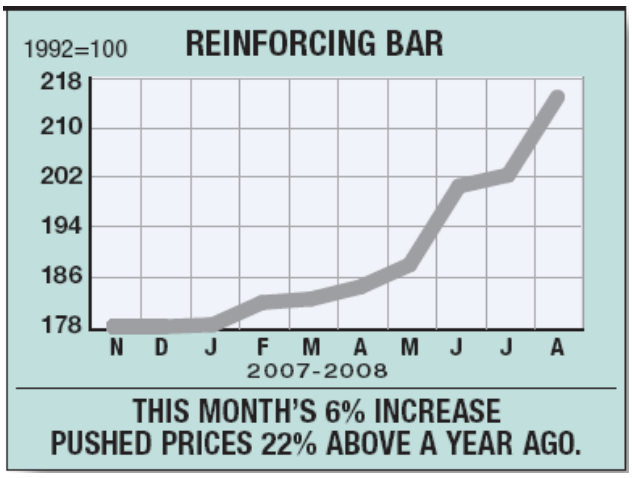
Bureau of Labor Statistics, AGC of America, 8/25/08

Steel

The latest steel price shock continues to reverberate through the ENR 20-city prices. The August price for channel, wide-flange, and I-beams jumped another 4.2% pushing the average price 20% above a year ago. This compares to a 21% year-to-year increase in August 2004, when construction experienced its last explosion in steel prices. The August price increase follows monthly price hikes of 1% in July, 6% in June, 4% in May and 2% in April. Reinforcing bar prices are up 22% over a year ago.

ENR – 9/1/08





Percentage Changes in Producer Price Indexes for 2001-2008

Item	2001	2002	2003	2004	2005	2006	2007	Net 12 Month Change
Steel Mill Products	-6.1	11.1	1.7	48.8	-3.8	11.6	1.0	33.4
Hot-rolled Bars, Plates, and Structural Shapes	-4.3	2.1	11.3	53.8	-1.0	7.5	8.1	33.2
Steel Pipe and Tube	-3.7	9.1	3.3	66.0	1.2	5.5	-1.9	34.7
Fabricated Structural Metal	-1.3	-2.4	0.1	24.7	2.8	3.6	5.3	16.2

Bureau of Labor Statistics, AGC of America, 8/25/08

Do you have estimating questions? Call Jason Henrie at 801-957-8605.

Do you have a suggestion for something you would like researched for a future edition of the Estimator's Corner Newsletter? Your suggestions are welcome and make the information in the Newsletter more useful for the readers.

Do you know anyone who would like to receive the monthly Estimator's Corner Newsletter? Please send your suggestions, ideas, questions, and requests to estimatorscorner@utah.gov and we will do our best to implement them.

Percentage Changes in Producer Price Indexes (PPIs) for Construction Materials and Components, 2001-2008

BLS Series ID		12 months through December--							to July 2008 since--			
		2001	2002	2003	2004	2005	2006	2007	6/08	4/08	7/07	12/03
Table 1: Changes in Consumer, Producer & Construction Prices												
CUUR0000SA0	Consumer price index (CPI-U)	1.6	2.4	1.9	3.3	3.4	2.5	4.1	0.5	2.4	5.6	19.4
WPUSOP3000	Producer price index (PPI) for finished goods	-1.6	1.2	4.0	4.2	5.4	1.1	6.3	1.4	4.7	9.8	28.0
PCUBCON	PPI for inputs to construction industries	-0.9	0.7	3.0	9.1	8.2	4.6	4.5	2.0	6.6	11.9	44.1
PCUBHWY	PPI for inputs to highway and street construction	-3.6	1.0	2.6	10.8	14.1	6.2	9.6	3.8	11.2	21.4	77.0
PCUBHVY	PPI for inputs to other heavy construction	-2.6	1.0	2.6	13.4	8.8	5.5	6.4	2.1	8.4	17.0	61.4
PCUBBLD	PPI for inputs to nonresidential buildings	-0.5	0.7	2.4	9.3	7.4	4.0	4.6	1.9	6.3	11.8	42.4
PCUBRSM	PPI for inputs to multi-unit residential	-0.1	0.4	2.7	8.9	7.8	4.9	3.7	1.3	4.7	8.5	38.4
PCUBRS1	PPI for inputs to single-unit residential	-0.4	0.6	3.5	7.0	6.9	4.2	2.4	1.4	4.4	7.1	30.9
Table 2: Changes in PPIs for New Buildings and Components												
PCU236211	New industrial building construction	not available before 2008; series began 6/07							1.8	1.7	4.3	n.a.
PCU236221	New warehouse construction	not available before 2005				7.5	8.1	4.4	1.9	2.0	4.4	n.a.
PCU236222	New school construction	not available; series began 12/05					17.3	2.0	-0.2	1.4	3.2	n.a.
PCU236223	New office construction	not available; series began 6/06						4.8	1.1	1.0	3.7	n.a.
PCU23811X	Concrete contractors, nonresidential building work	not available; series began 12/07							1.6	1.3	n.a.	n.a.
PCU23816X	Roofing contractors, nonresidential building work	not available; series began 12/07							1.3	3.5	n.a.	n.a.
PCU23821X	Electrical contractors, nonresidential building work	not available; series began 12/07							0.6	1.2	n.a.	n.a.
PCU23822X	Plumbing contractors, nonresidential building work	not available; series began 12/07							1.2	2.5	n.a.	n.a.
Table 3: Changes in PPIs for Specific Construction Inputs												
WPU057303	#2 diesel fuel	-44.7	54.4	13.0	37.9	46.7	2.3	33.9	2.7	18.5	77.6	333.2
WPU05810112	Asphalt (at refinery)	not available		10.0	18.3	17.8	34.9	5.8	21.3	58.0	78.1	290.9
WPU139401	Asphalt paving mixtures and blocks	0.9	2.0	3.7	4.3	14.3	27.6	1.3	14.4	28.4	34.2	108.0
WPU136	Asphalt felts and coatings	4.6	-0.6	6.3	4.1	15.3	5.0	-2.5	12.0	22.7	27.9	59.7
WPU1361	Prepared asphalt & tar roofing & siding products	5.0	-1.7	5.3	4.6	16.2	5.2	-2.4	11.3	22.4	27.4	60.9
WPU133	Concrete products	2.5	-0.3	1.5	7.6	10.1	8.1	3.3	0.1	0.7	3.8	36.6
WPU1331	Concrete block and brick	2.3	1.6	3.2	4.7	8.1	6.8	3.2	0.4	1.5	2.8	28.3
WPU1332	Concrete pipe	4.4	1.7	1.4	5.5	7.5	2.5	1.1	0.6	3.8	13.2	34.0
WPU1333	Ready-mixed concrete	2.5	-1.1	1.1	8.7	11.3	10.1	3.3	0.0	0.9	2.6	40.1
WPU1334	Precast concrete products	0.7	0.3	2.5	6.0	6.0	4.7	4.8	0.0	-2.0	4.7	28.9
WPU1335	Prestressed concrete products	5.3	1.8	-0.2	8.2	14.3	4.9	1.2	1.7	3.3	4.7	37.4
WPU1342	Brick and structural clay tile	5.3	1.9	0.7	3.0	9.4	6.0	-0.2	0.2	-0.2	-0.7	18.9
WPU072106	Plastic construction products	-2.7	3.1	3.2	7.2	21.6	-0.7	0.3	1.8	4.0	4.5	35.4
WPU137	Gypsum products	0.4	3.4	2.8	20.0	18.8	5.5	-22.2	1.3	-0.4	-6.1	18.7
WPU1392	Insulation materials	0.4	-1.5	2.0	8.6	2.6	2.1	-3.3	-0.3	-0.9	-3.6	7.6
WPUSI004011	Lumber and plywood	-2.9	1.4	13.1	5.0	-1.1	-10.8	-1.3	-2.2	2.2	-5.9	-7.7
WPU062101	Architectural coatings	2.9	0.6	3.9	5.3	9.2	6.3	4.1	0.2	0.3	4.1	32.5
WPU1017	Steel mill products	-6.1	11.1	1.7	48.8	-3.8	11.6	1.0	1.7	21.8	33.4	125.6
WPU101704	Hot-rolled bars, plates, & structural shapes	-4.3	2.1	11.3	53.8	-1.0	7.5	8.1	4.3	20.6	33.2	144.8
WPU101706	Steel pipe and tube	-3.7	9.1	3.3	66.0	1.2	5.5	-1.9	2.9	18.3	34.7	137.5
WPU102502	Copper and brass mill shapes	-9.5	-1.6	11.6	29.6	31.0	44.4	-3.8	2.8	-0.3	-0.5	172.3
WPU102501	Aluminum mill shapes	-2.9	-0.9	-0.5	9.9	5.0	12.7	-1.7	0.5	0.4	3.9	37.2
WPU1073	Sheet metal products	-0.8	2.0	0.6	15.2	0.4	6.5	0.4	1.2	5.0	8.8	196.9
WPU107405	Fabricated structural metal	-1.3	-2.4	0.1	24.7	2.8	3.6	5.3	1.5	5.3	16.2	60.4
WPU10740501	Fabricated structural metal for buildings	-1.5	-3.3	-0.1	20.0	3.1	3.3	4.7	0.7	3.9	13.0	49.8
WPU107408	Architectural and ornamental metalwork	-0.1	3.7	0.7	23.5	3.1	4.9	2.8	2.6	9.1	13.8	54.8
WPU107409	Fabricated iron & steel pipe, tube, & fittings	0.6	0.1	1.2	32.6	5.5	-2.8	-1.6	0.6	5.9	8.9	44.3
WPU1076	Fabricated steel plate	0.6	-1.0	0.6	7.6	0.6	8.6	9.9	-0.7	4.9	21.6	45.2
WPU1079	Prefabricated metal buildings	0.0	4.0	-0.7	35.5	2.0	5.5	1.8	1.5	13.0	25.6	88.0
WPU112	Construction machinery and equipment	-0.1	1.9	1.3	6.0	4.9	3.6	2.2	0.4	1.1	2.9	20.6
Table 4: Changes in PPIs for Basic Inputs Important to Construction												
WPU056	Crude petroleum (domestic production)	-42.4	60.6	14.3	30.5	49.6	0.1	52.4	6.7	23.8	94.3	367.3
WPU0553	Industrial natural gas	-36.7	12.2	20.3	20.1	31.5	-13.2	-4.6	7.8	21.7	37.5	82.5
WPU066	Plastic resins and materials	-9.8	9.2	6.4	28.6	10.8	-7.8	10.0	7.6	11.2	19.2	64.4
WPU1321	Construction sand/gravel/crushed stone	3.3	2.5	2.4	4.3	7.7	9.3	8.6	0.3	0.7	7.0	39.2
WPU1322	Cement	1.0	1.3	-1.1	7.9	12.2	10.5	3.5	-0.8	-0.3	0.0	39.5
WPU1011	Iron ore	1.5	-1.3	1.6	6.7	15.5	7.5	1.3	0.0	0.0	12.0	50.5
WPU1012	Iron and steel scrap	-5.6	27.8	64.9	50.8	-10.8	2.9	30.4	5.2	15.0	110.5	247.3
WPU101212	Stainless and alloy steel scrap	no data from 1996 until September 2006						-7.7	4.6	-18.8	-10.7	n.a.
WPU102102	Copper ores	-19.6	3.6	37.4	65.1	39.3	53.1	-0.9	2.5	4.6	0.9	327.4
WPU102301	Copper base scrap	-17.4	11.2	30.7	34.5	51.9	50.0	1.2	1.8	-2.3	14.1	280.8

Updated 8/25/08 Source: Bureau of Labor Statistics (BLS): www.bls.gov/cpi for CPI, www.bls.gov/ppi for PPIs

Compiled by Ken Simonson (simonsonk@agc.org), Chief Economist, Associated General Contractors of America, www.agc.org